

What is claimed is:

- 1 1. A method for doing call classification on a call to a
2 destination endpoint, comprising the steps of:
3 receiving audio information from the destination
4 endpoint;
5 analyzing using automatic speech recognition the
6 received audio information for a first type of classification;
7 analyzing using automatic speech recognition the
8 received audio information for a second type of classification;
9 and
10 determining a call classification for the destination
11 endpoint in response to the analysis of the first type of
12 classification and the analysis of the second type of
13 classification.
- 1 2. The method of claim 1 wherein the analysis for the
2 first type of classification is analyzing the audio information for
3 words.
- 1 3. The method of claim 2 wherein the analyzed words
2 are formed as phrases.
- 1 4. The method of claim 2 wherein the analysis for the
2 second type of classification is analyzing the audio information
3 for tones.

1 5. The method of claim 4 wherein the step of
2 receiving audio information further comprises detecting speech
3 or tones in the audio information.

1 6. The method of claim 5 wherein the step of
2 analyzing for the first type of classification is responsive to the
3 detection of speech in the audio information to enable the step
4 of executing a Hidden Markov Model to determine the presence
5 of words in the audio information.

1 7. The method of claim 6 wherein the step of
2 executing comprises the step of using a grammar for speech.

1 8. The method of claim 6 wherein the step of
2 analyzing for the second type of classification is responsive to
3 the detection of tone in the audio information to enable the step
4 of executing a Hidden Markov Model to determine the presence
5 of tones in the audio information.

1 9. The method of claim 8 wherein the step of
2 executing comprises the step of using a grammar for tones.

1 10. The method of claim 8 wherein the step of
2 determining comprises the step of executing an inference
3 engine.

1 11. A method for doing call classification on a call to a

2 destination endpoint, comprising the steps of:
3 receiving audio information from the destination
4 endpoint;
5 detecting speech or tones in received audio
6 information.
7 analyzing using automatic speech recognition the
8 received audio information for words in response to the
9 detection of speech;
10 analyzing using automatic speech recognition the
11 received audio information for tones in response to the
12 detection of tones; and
13 determining a call classification for the destination
14 endpoint in response to the analysis of words or the analysis of
15 tones.

1 12. The method of claim 11 wherein the step of
2 analyzing for speech comprises the step of executing a Hidden
3 Markov Model to determine the presence of words in the audio
4 information.

1 13. The method of claim 12 wherein the step of
2 executing comprises the step of using a grammar for speech.

1 14. The method of claim 12 wherein the step of
2 analyzing for tones comprises the step of executing a Hidden
3 Markov Model to determine the presence of tones in the audio

4 information.

1 15. The method of claim 14 wherein the step of
2 executing comprises the step of using a grammar for tones.

1 16. The method of claim 15 wherein the step of
2 determining comprises the step of executing an inference
3 engine.

1 17. A method for doing call classification by a
2 automatic speech recognition unit on a call to a destination
3 endpoint, comprising the steps of:
4 receiving audio information from the destination
5 endpoint by the automatic speech recognition unit;
6 analyzing using automatic speech recognition the
7 received audio information for a first type of classification by the
8 automatic speech recognition unit;
9 analyzing using automatic speech recognition the
10 received audio information for a second type of classification
11 automatic speech recognition unit; and
12 determining a call classification for the destination
13 endpoint in response to the analysis of the first type of
14 classification and the analysis of the second type of
15 classification by the automatic speech recognition unit.

1 18. The method of claim 17 wherein the analysis for
2 the first type of classification is analyzing the audio information

3 for words.

1 19. The method of claim 18 wherein the analyzed
2 words are formed as phrases.

1 20. The method of claim 18 wherein the analysis for
2 the second type of classification is analyzing the audio
3 information for tones.

1 21. The method of claim 20 wherein the step of
2 receiving audio information further comprises detecting speech
3 or tones in the audio information.

1 22. The method of claim 21 wherein the step of
2 analyzing for the first type of classification is responsive to the
3 detection of speech in the audio information to enable the step
4 of executing a Hidden Markov Model to determine the presence
5 of words in the audio information.

1 23. The method of claim 22 wherein the step of
2 executing comprises the step of using a grammar for speech.

1 24. The method of claim 22 wherein the step of
2 analyzing for the second type of classification is responsive to
3 the detection of tone in the audio information to enable the step
4 of executing a Hidden Markov Model to determine the presence
5 of tones in the audio information.

1 25. The method of claim 24 wherein the step of
2 executing comprises the step of using a grammar for tones.

1 26. The method of claim 24 wherein the step of
2 determining comprises the step of executing an inference
3 engine.

1 27. A call classifier for determining the call
2 classification of a called destination endpoint, comprising:
3 an automatic speech recognizer for detecting first
4 characteristics in audio information received from the called
5 destination endpoint;
6 the automatic speech recognizer further detecting
7 second characteristics in the audio information received from
8 the called destination endpoint; and
9 inference engine for classifying the call in response to
10 the automatic speech recognizer.

1 28. The call classifier of claim 27 wherein the first
2 characteristics are words.

1 29. The call classifier of claim 28 wherein the words
2 are formed into phrases.

1 30. The call classifier of claim 28 wherein the second
2 characteristics are tones.

- 1 31. The call classifier of claim 30 wherein the
- 2 automatic speech recognizer is executing a Hidden Markov
- 3 Model.